# Appendix-1

# EXAMPLE OF GOVERNMENT SECURITIES REVERSE REPO TRANSACTION USING THE FIXED RATE TENDER METHOD

#### **Transaction Plan**

Indicative Target: Rp 2 trillion

Tender method: Fixed Rate at 8.00%

Underlying assets: Government Bonds (GB)

VR series 000x, 2,000,000 units @ Rp1,000,000.-

Price 98.00

Tenor: 28 days

Window time: 10.00-14.00 hours local time in Jakarta

Settlement: T+1

# Table 1 – Illustration of RR bids

(in millions of rupiahs)

Bank	Bid Quantity	Cumulative Bid	RR-Rate	GS	
			(%)	Series	Price (%)
(1)	(i2)	(3)	(4)	(5)	(6)
Bank A	500,000	500,000	8.00	VR 000x	98.00
Bank B	750,000	1,250,000	8.00	VR 000x	98.00
Bank C	600,000	1,850,000	8.00	VR 000x	98.00
Bank D	300,000	2,150,000	8.00	VR 000x	98.00
Bank E	200,000	2,350,000	8.00	VR 000x	98.00
Bank F	500,000	2,850,000	8.00	VR 000x	98.00

#### **Determination of Winning GS-RR Bids**

Quantity accepted : Rp 2 trillion out of Rp2.85 trillion in total incoming bids

Winning bidders : All Banks with quantity awarded pro rata

<u>Table 2 – Calculation of GS-RR quantity and settlement in bidding result (first leg)</u>

(in millions of rupiahs)

	(in mimons of tupians)								
Banks with	Quantity	Cumulative	RR-	Se	curities Settlen	nent	Funds Settlement		
Winning	Awarded 1)		Rate	Series	GS Price	Par Value 2)	Accrued	Funds Settlement	
Bids			(%)		(%)		Interest	Value 3)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	$(9) = \{(2) \times (6)\} + (8)$	
Bank A	350,877	350,877	8.00	VR 000x	98.00	350,877	20	343,880	
Bank B	526,316	877,193	8.00	VR 000x	98.00	526,316	20	515,809	
Bank C	421,053	1,298,246	8.00	VR 000x	98.00	421,053	20	412,652	
Bank D	210,526	1,508,772	8.00	VR 000x	98.00	210,526	20	206,336	
Bank E	140,351	1,649,123	8.00	VR 000x	98.00	140,351	20	137,564	
Bank F	350,877	2,000,000	8.00	VR 000x	98.00	350,877	20	343,880	

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#### Notes:

1) Quantity awarded to each Bank is calculated pro rata, rounded off to the nearest Rp 1 million. Sample calculation for Bank A:

Bid quantity (500,000,000,000)

------ X Quantity accepted (2,000,000,000,000)
Total bids placed (2,850,000,000,000)

- 2) Par value is the par value of the GS to be credited to the securities account held by the Bank.
- 3) Funds settlement value is the purchase value of GS under reverse repo to be debited from the demand deposit account of the Bank.

#### Table 3 – If any coupon payments took place during the tenor of the GS-RR transaction

#### Assumptions:

- The tenor of the series VR 000x GS-RR transactions in Table 2 is from January 1 through January 28 (28 days); and
- On January 20 (during the reverse repo period), there was a coupon payment for 2,000,000 units of the traded series VR 000x, valued at Rp 1.2 billion. This coupon value is credited in favor of each Bank awarded bids on a pro rata basis, according to the awarded quantity of GS.

The coupons and the RR-Rate interest to be received by Banks awarded bids are calculated as follows:

(in millions of rupiahs)

Bank	GS-RR Amount	Pro rata o payme		Value of first leg funds settlement		RR-Rate (%)	Calculation of RR-Rate Interest <sup>3)</sup>	
		%	Rp	Prior to coupon date	After coupon date <sup>2)</sup>		Jan 1-20	Jan 20-28
(1)	(2)	(3)	(4)	(5)	(6) = (5)-(4)	(7)	(8)	(9)
Bank A	350,877	17.54	211	343,880	343,669	8.00	1,528	611
Bank B	526,316	26.32	316	515,809	515,493	8.00	2,292	916
Bank C	421,053	21.05	253	412,652	412,396	8.00	1,834	733
Bank D	210,526	10.53	126	206,336	206,209	8.00	917	367
Bank E	140,351	7.02	84	137,564	137,480	8.00	611	244
Bank F	350,877	17.54	211	343,880	343,669	8.00	1,528	611

#### Notes:

1) The Rp 1.2 billion coupon value for all VR000x units is calculated pro rata (column 3 and column 4) for each Bank with winning bids according to the quantity of GS awarded to the Bank (column 2).

Sample calculation for Bank A:

GS par value awarded to Bank (350,877,000,000)

------ X 100% = 17.54%

Total GS sold by BI (2,000,000,000,000)

17.54% X Rp 1,200,000,000 = Rp 211,000,000.

- 2) Because the funds settlement in the first leg comprises placement of Bank funds at Bank Indonesia, the pro rata coupon payment (column 4) will reduce the value of the funds settlement at the second leg of the GS-RR transaction.
- 3) RR-Rate interest is calculated according to the following formula: (Funds settlement value x RR-Rate) x (tenor of transaction / 360)

The RR Rate interest received by the Bank is calculated in two stages as follows:

- the January 1-20 period, based on funds settlement value in the first leg.
- the January 20-28 period, based on funds settlement value in the first leg subtracted by the coupon paid in favor of the Bank.

### Table 4 – GS-RR settlement at the second leg

The final calculation of funds settlement and securities settlement in the second leg of the GS-RR transaction is as follows:

(in millions of rupiahs)

Bank	RR-Rat	e interest	First leg funds settlement value, after deduction for	Funds Settlement Value 1)	Securities Settlement Value	
	Jan 1-20	Jan 20-28	coupon			
(1)	(2)	(3)	(4)	(5) = (2)+(3)+(4)	(6)	
Bank A	1,528	611	343,669	345,808	350,877	
Bank B	2,292	916	515,493	518,403	526,316	
Bank C	1,834	733	412,396	414,966	421,053	
Bank D	917	367	206,209	207,493	210,526	
Bank E	611	244	137,480	138,335	140,351	
Bank F	1,528	611	343,669	345,808	350,877	

#### Notes:

1) The funds settlement value is the resale value of the GS-RR to be credited to the Bank as redemption in the second leg of the GS-RR transaction.

Appendix-2

# EXAMPLE OF GOVERNMENT SECURITIES REVERSE REPO TRANSACTION USING THE VARIABLE RATE TENDER METHOD

# **Transaction Plan**

Indicative Target: Rp 4.5 trillion
Tender method: Variable rate

Underlying assets:

DESCRIPTION	PRICE	INDICATIVE TARGET
VR000x	98.48	2,000,000 units @ Rp1,000,000
FR000x	98.00	2,500,000 units @ Rp1,000,000

Tenor: 28 days

Window time: 10.00-14.00 hours local time in Jakarta

Settlement: T+1

#### **Table 1 – Illustration of GS-RR bids**

# [1] GS-RR bids for VR 000x

(in millions of rupiahs)

Bank	Bid Quantity	Cumulative Bids	RR-Rate (%)	GS	
				Series	Price (%)
(1)	(2)	(3)	(4)	(5)	(6)
Bank A	500,000	500,000	7.65	VR 000x	98.48
Bank C	750,000	1,250,000	7.75	VR 000x	98.48
Bank D	600,000	1,850,000	7.80	VR 000x	98.48
Bank B	300,000	2,150,000	7.80	VR 000x	98.48
Bank E	200,000	2,350,000	7.80	VR 000x	98.48
Bank F	500,000	2,850,000	8.00	VR 000x	98.48

#### [2] GS-RR bids for FR 000x

(in millions of rupiahs)

Bank	Bid Quantity	Cumulative Bids	RR-Rate (%)	GS	5
				Series	Price (%)
(1)	(2)	(3)	(4)	(5)	(6)
Bank A	500,000	500,000	7.65	FR000x	98.00
Bank B	750,000	1,250,000	7.75	FR000x	98.00
Bank C	600,000	1,850,000	7.80	FR000x	98.00
Bank D	300,000	2,150,000	7.80	FR000x	98.00
Bank E	200,000	2,350,000	7.80	FR000x	98.00
Bank F	100,000	2,450,000	8.00	FR000x	98.00

## Total incoming GS-RR bids

- [1] For VR000x Rp2.85 trillion
- [2] For FR000x Rp2.45 trillion

# **Determination of Winning GS-RR Bids**

[1]GS-RR auction for VR000x

Quantity accepted: Rp 2 trillion

7.80% Highest RR-Rate accepted:

Winning Bids: Bank Bids with RR-Rate < 7.80% awarded in full

Bank Bids with RR-Rate = 7.80% awarded pro rata

[2] GS-RR Auction for FR000x

Quantity accepted: Rp 2 trillion Highest RR-Rate accepted: 7.80%

Winning Bids: Bank Bids with RR-Rate < 7.80% awarded in full Bank Bids with RR-Rate = 7.80% awarded pro rata

Table 2 – Calculation of GS-RR quantity and settlement after auction (first leg)

### [1] Calculation of GS-RR winning bids for VR000x

(in billions of rupiahs)

	Quantity	Cumulative	RR-	Sec	urities Settl	ement	Funds Settlement	
	awarded 1)		Rate	Series	GS	Par Value 2)	Accrued	Funds Settlement
			(%)		Price		Interest	Value 3)
					(%)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	$(9) = \{(2)x(6)\} + (8)$
Bank A	500,000	500,000	7.65	VR 000x	98.48	500,000	0	492,409
Bank C	750,000	1,250,000	7.75	VR 000x	98.48	750,000	0	738,613
Bank D1)	409,091	1,659,091	7.80	VR 000x	98.48	409,091	0	402,880
Bank B1)	204,545	1,863,636	7.80	VR 000x	98.48	204,545	0	201,440
Bank E1)	136,364	2,000,000	7.80	VR 000x	98.48	136,364	0	134,293

#### Notes:

1) Because Banks D, B, and E bidded at the same rate (RR-Rate of 7.80%), the quantities awarded to Banks D, B, and E are calculated pro rata in multiples rounded off to the nearest Rp 1 million. Sample calculation for Bank D:

Bid quantity (300,000,000,000)

X (2,000,000,000,000 - 750,000,000,000)

Bids placed by Banks D,B,E (1,100,000,000,000)

- 2) Par value is the GS par value to be credited to the securities accounts held by the Banks.
- 3) Funds settlement value is the value of the GS purchase under reverse repo to be debited from the demand deposit account of the Bank.

#### [2] Calculation of the GS-RR bidding result for FR000x

(in millions of rupiahs)

	Quantity	Cumulative	RR-	Secu	rities Settle	ment	Funds Settlement	
	awarded		Rate	Series	GS	Par Value	Accrued	Funds Settlement
			(%)		Price		Interest	Value
					(%)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	$(9) = \{(2)x(6)\} + (8)$
Bank A	500,000	500,000	7.65	FR000x	98.00	500,000	20	490,020
Bank B	750,000	1,250,000	7.75	FR000x	98.00	750,000	20	735,020
Bank C	409,091	1,659,091	7.80	FR000x	98.00	409,091	20	400,929
Bank D	204,545	1,863,636	7.80	FR000x	98.00	204,545	20	200,475
Bank E	136,364	2,000,000	7.80	FR000x	98.00	136,364	20	133,656

For the sample GS-RR auction transaction, the FR000x series is assumed not to carry any coupon payment during the period of the GS-RR transaction, and settlement for redemption of the GS-RR transaction at the second leg is calculated directly from the first leg result.

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#### Table 3 – GS-RR settlement at the second leg

# [1] Calculation of second leg settlement for VR000x

(in billions of rupiahs)

	Value at		D.D.	Fu	ınds Settleme	nt	
Bank	maturity of first leg funds settlement	RR- Rate (%)	RR- Rate Interest	First leg funds settlement value + RR-Rate interest	Coupon Payment	Funds Settlement Value <sup>2)</sup>	Securities Settlement <sup>3)</sup>
(1)	(2)	(3)	(4)	(5)	(7)	(8) = (5) - (7)	(9)
Bank A	492,409	7.65	2,930	495,339	0	495,339	500,000
Bank C	738,613	7.75	4,452	743,065	0	743,065	750,000
Bank D1)	402,880	7.80	2,444	405,324	0	405,324	409,091
Bank B1)	201,440	7.80	1,222	202,662	0	202,662	204,545
Bank E1)	134,293	7.80	815	135,108	0	135,108	136,364

#### Notes:

- 1) The RR-Rate Interest paid by Bank Indonesia is calculated using the formula: (GS-RR purchase value at maturity x RR-Rate) x (tenor of transaction / 360)
- 2) Funds settlement value is the resale value of the GS-RR to be credited to the demand deposit account of the bank.
- 3) Securities settlement value is the amount to be debited from the securities account held by the Bank.

#### [2] Second leg settlement calculation for FR000x

(in billions of rupiahs)

	GS-RR RR-		RR-	Fu	Securities Securities		
Bank	purchase value at second leg	Rate (%)	Rate Interest	GS-RR Purchase Value + RR-Rate Interest	Coupon payment 2)	GS-RR Resale Value <sup>3)</sup>	Settlement Value 4)
(1)	(2)	(3)	(4)	(5)	(7)	(8) = (5) - (7)	(9)
Bank A	490,020	7.65	2,916	495,339	0	492,936	500,000
Bank B	735,020	7.75	4,430	743,065	0	739,450	750,000
Bank C	400,929	7.80	2,432	405,324	0	403,361	409,091
Bank D	200,475	7.80	1,216	202,662	0	201,691	204,545
Bank E	133,656	7.80	811	135,108	0	134,467	136,364